

ABSTRACT OF THE DISCLOSURE

A dry cleaning system is disclosed which utilizes liquid carbon dioxide as the cleaning medium. Two storage tanks are employed in conjunction with a cleaning vessel. One of the storage tanks is employed for pressure equalization with the cleaning vessel, while the other storage tank is employed for bulk solvent transfer to and from the cleaning vessel. The temperature drop associated with pressure equalization is limited to residual liquid solvent in the pressure equalization tank. At the completion of substrate agitation in the cleaning vessel, liquid solvent is transferred back into the bulk transfer tank, while gaseous solvent is extracted into the pressure equalization tank. The temperature of the cleaning vessel and substrates drops during vapor recovery, while the temperature in the recovered vapor is elevated. The return line from the cleaning vessel is routed back into the cleaning vessel where it forms a heat exchange coil. To raise the temperature of the residual solvent in the pressure equalization tank, the recovered gas is introduced through the residual solvent through a sparging tube.

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